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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,439	08/14/2003	John H. Brophy	02-024	2458
34833	7590	08/22/2006	EXAMINER	
FRANK ROSENBERG 18 ECHO HILL LANE MORAGA, CA 94556			PASTERCZYK, JAMES W	
			ART UNIT	PAPER NUMBER
			1755	
DATE MAILED: 08/22/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/642,439	Applicant(s) BROPHY ET AL.	
	Examiner J. Pasterczyk	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11,24,28,32,34-43 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11,24,28,32,34-43 and 45-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>5/25/06</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/3/06</u> . | 6) <input type="checkbox"/> Other: _____.   |

1. This Office action is in response to the RCE filed 7/12/06 and the IDS filed 8/3/06 and refers to the final rejection mailed 2/8/06. The prior art rejections made in the previous office action are withdrawn due to convincing argument. However, c.f. below for further formal and prior art rejections.

2. The drawing filed 7/12/06 is approved as it corrects the deficiencies found in the previous version filed 12/9/05.

3. Claims 1, 3-9, 11, 24, 28, 32, 34-43 and 45-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, penultimate line, “or” requires that either the first or second condition hold. However, in claim 6, the “and” in the second line requires that both conditions hold. Hence these two claims are inconsistent with each other, and it is not clear which is correct.

In claim 3, “the system comprises a tethered catalyst composition, and” is prolix since its limitation is inherent in the remainder of the claim. End the second line with --of the microchannel--, and in l. 3 insert --the-- before “bulk” and --of the catalyst reactant-- after “path”.

In claims 37 and 38, make the last word plural.

In claim 40, the compounds recited are not technically organometallic since they have no M-C bonds; however, they are clearly inorganic.

In claim 42, it is not clear what this gap refers to; is it the width of the channel? Or some other particular opening?

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In claim 48, change "a surface" to --the surface of said solid support-- for clear antecedent basis.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 7, 24, 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haswell et al., Lab on a Chip, 2001, vol. 1, pp. 164-166 (hereafter referred to as Haswell).

Haswell discloses the invention substantially as claimed (scheme 1; first paragraph of "Experimental" section; first paragraph of "Flow experiments" section; second paragraph of "Results and discussion - Flow reactors" section).

Haswell lacks explicit disclosure of the catalyst being coated in a microchannel.

However, Haswell clearly teaches that its catalyst was coated onto the inside of a capillary channel in order to simulate a microreactor wall.

It would have been obvious to one of ordinary skill in the art to apply that skill to the disclosure of Haswell with a reasonable expectation of obtaining a highly-useful catalyst system with the expected benefit of the system being useable in preparation scale reactions.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Pasterczyk

AU 1755

8/16/06



J.A. LORENGO  
SUPERVISORY PATENT EXAMINER